

COLMAN et al  
Appl. No. 10/510,441  
September 21, 2007

### **REMARKS/ARGUMENTS**

Reconsideration of this application is requested. Claims 11-23 are in the case.

#### **I. SPECIFICATION**

The drawings have been objected to as set forth on pages 2 and 3 of the Action. The objection says that the drawings are objected to because they fail to show the essential elements of the invention as described in the specification, that any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing, and that corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office Action to avoid abandonment of the application.

At no point in the paragraph bridging pages 2 and 3 of the Action is there any indication given as to what specifically is believed to be deficient so far as the drawings are concerned. The undersigned has attempted to contact the Examiner (Ms. Horton) with no success. It appears from the USPTO website that Ms. Horton may no longer be with the Office. The undersigned has also attempted to contact the Examiner's supervisor on several occasions but has not been able to speak with the supervisor.

It is not seen how the drawings fail to show the essential features of invention. The Action does not say how the drawings do not show these features. For these reasons, it is not possible to respond to the drawing objections. Clarification of the objections or withdrawal of the objections is respectfully requested.

The specification has been amended to include a brief description of the drawings together with other customary headings. No new matter is entered.

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**II. THE 35 U.S.C. §112, FIRST PARAGRAPH, REJECTION**

Claims 11-23 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. This rejection is respectfully traversed.

The Action alleges that it is not clear if the web of plates comprises internal branches that terminate at the grid periphery or within the grid. In response, the web of plates comprises a network of strands of plate segments connected by junctions and one or more internal plate branches. Each plate segment is joined at one end to a junction with at least two other plate segments and the other end is joined to a junction with at least two other plate segments or terminating at or near the periphery of the grid. The one or more internal plate branches comprise a plate having a free end within the grid and are joined at one end thereof to a segment or to another branch. It is believed clear that the one or more internal plate branches have a free end within the grid.

It is believed one of ordinary skill would have no difficulty understanding the claimed structure. For consistency, the expression "said internal branch comprising" has been amended to read "said internal plate branch comprising" to be consistent with the terminology used in paragraph (b) of claim 11.

Withdrawal of the outstanding 35 U.S.C. §112, first paragraph, rejection is now believed to be in order. Such action is respectfully requested.

**III. THE 35 U.S.C. §112, SECOND PARAGRAPH, REJECTION**

Claims 11-23 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for the reasons detailed in the paragraphs bridging pages 3 and 4 of

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the Action. In response, the claims have been amended to improve their form. The following comments are offered.

The phrase "and/or" has been removed in claims 11, 12 and 17 and replaced by alternative language. Claim 11 has been amended to replace "the said strands" with "said strands". Claims 12, 17 and 21 have been amended to replace the phrases "may be" and "can be" with "is".

Withdrawal of the outstanding 35 U.S.C. §112, second paragraph, is now believed to be in order. Such action is respectfully requested.

#### IV. THE ANTICIPATION REJECTION

Claims 11-15, 17, 18, 22 and 23 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by U.S. Patent 4,565,745 to Kaminskis. That rejection is respectfully traversed.

As noted above, the invention provides a grid having the form of a web of vertically disposed plates. The web of plates comprises (a) a network of strands of plate segments connected by junctions and terminating only at the periphery of the grid, and (b) one or more internal plate branches. Each plate segment is joined at one end to a junction with at least two other plate segments and at the other end is joined to a junction with at least two other plate segments or terminates at or near the periphery of the grid. The internal plate branch comprises a plate having a free end within the grid and is joined at one end thereof to a segment or to another branch. In horizontal cross-section through the grid, each segment has at least two angular portions, at least two

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curved portions or at least two angular and curved portions, which portions alternate in direction.

Kaminskas describes a wire mesh radio antenna made by etching a sheet of metallic foil to leave the strands with an oscillating pattern. Whilst these will have a certain depth (corresponding to the thickness of foil originally used), these are not "plates" in the context of the present invention. Kaminskas contains no disclosure of "plates" or "internal branches" as recited in the present invention. .

In addition, the mesh structure disclosed by Kaminskas comprises only "segments" (between 23 and 25, 25 and 27) which terminate at the periphery of the structure. No internal (plate) branches as defined in the present claims are disclosed by Kaminskas. The Action contains a marked up Figure from Kaminskas with "IB". However, these would correspond to segments, and have no "free end" as required by the presently claimed structure. Withdrawal of the anticipation rejection is respectfully requested.

#### **V. THE OBVIOUSNESS REJECTION**

Claims 16 and 19-21 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Kaminskas. That rejection is respectfully traversed.

Kaminskas relates to an antenna structure for radio communications, specifically in the form of a mesh of wires. The mesh requires key properties, including being of light weight, being able to be folded and unfolded, and having good radiofrequency properties (see col. 1, lines 51-55 and lines 32-39). In contrast, the present invention provides a grid made from plates suitable for load-bearing applications. The grid has a

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certain amount of flexibility in the horizontal plane to accommodate thermal expansion, but is required to be strong in the vertical plane for its load-bearing properties - hence the use of plates (providing a depth in this direction). The foldable/unfoldable structure of the prior art could not provide such strength. Moreover, there would have been no motivation to modify Kaminskas to the form of plates because this would result in loss of the ability to fold/unfold the structure and an increase in weight (possibly also loss of radiofrequency properties). Similarly, providing internal branches would not necessarily improve any of the properties of the antenna, and it would be difficult to add branches to Kaminskas in view of the small spacings required for adequate rf reflectivity (column 1, lines 61-63).

For all of the above reasons, it is clear that one of ordinary skill would not have been motivated to arrive at the presently claimed invention based on Kaminskas. Absent any such motivation, a *prima facie* case of obviousness has not been generated in this case. Reconsideration and withdrawal of the outstanding obviousness rejection are accordingly respectfully requested.

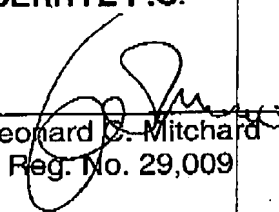
Favorable action is awaited.

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Respectfully submitted,

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